

Final Project Report

# TicTacToe

By:

- Ali Aldaghishy
- Yasir Almutairi

- Contribution

Ali Aldaghishy: Board Implementation, TicTacToe constructors, check isGameOver, Play game, End game, Helper functions, Exceptions.

Yasir Almutairi: Saving and Loading functionality, Printing the Board, Restart Board, Scores, Check winner, Multiplayer functionality, Exceptions, Demo.

- Architecture, Structure, and Design

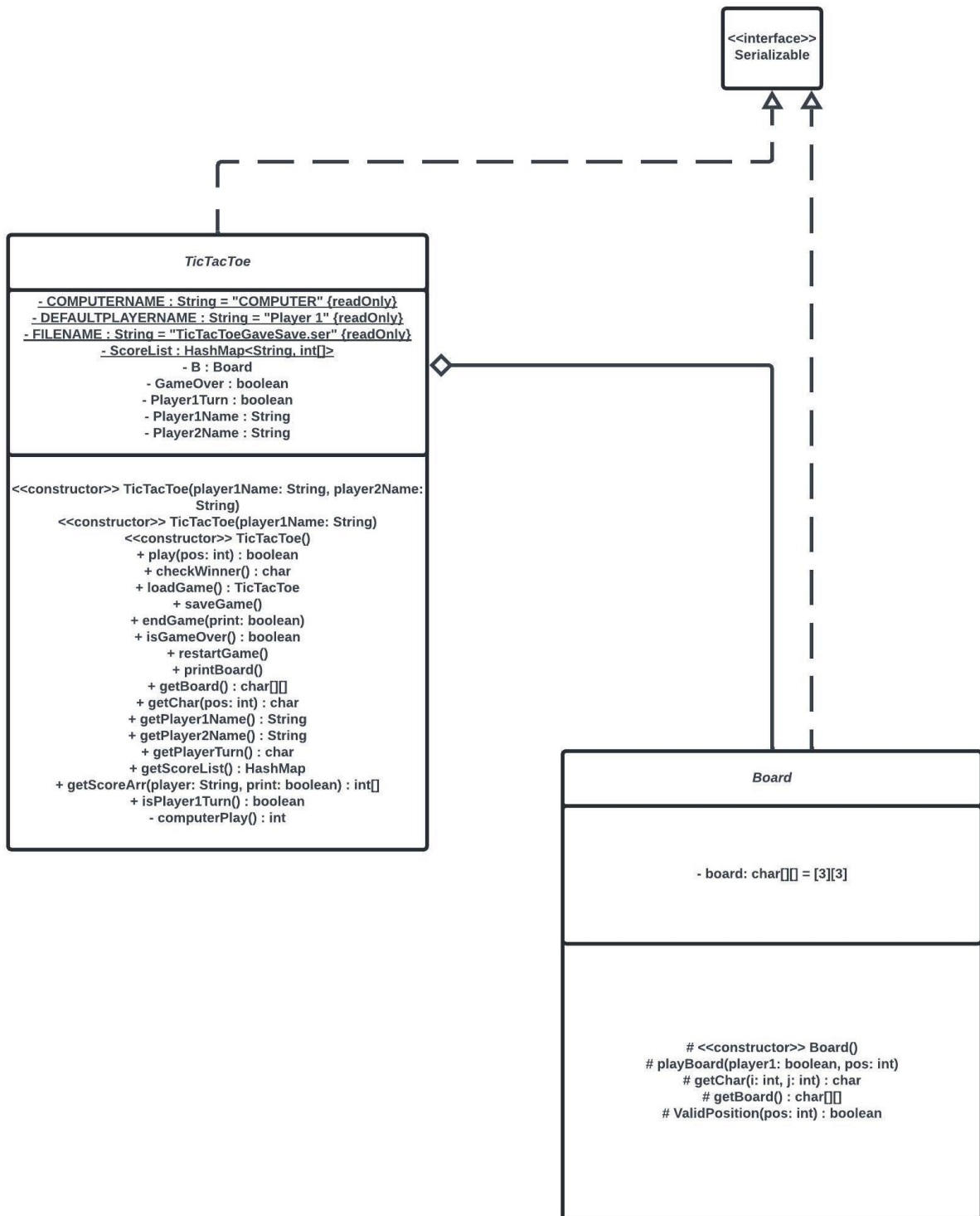
The project was built on the idea to be as isolated as possible so that a user can use it without adding any functionality outside the package, with this implementation the package can be used in many instances including but not limited to: GUI applications, text-based applications, etc.

In designing the project, we aimed for user-friendly structure, with that in place, the user only has to interact with one object "TicTacToe", this object handles all of the functionality and all other necessary objects including the "Board". The "TicTacToe" object utilizes the "Board" in a composition relationship.

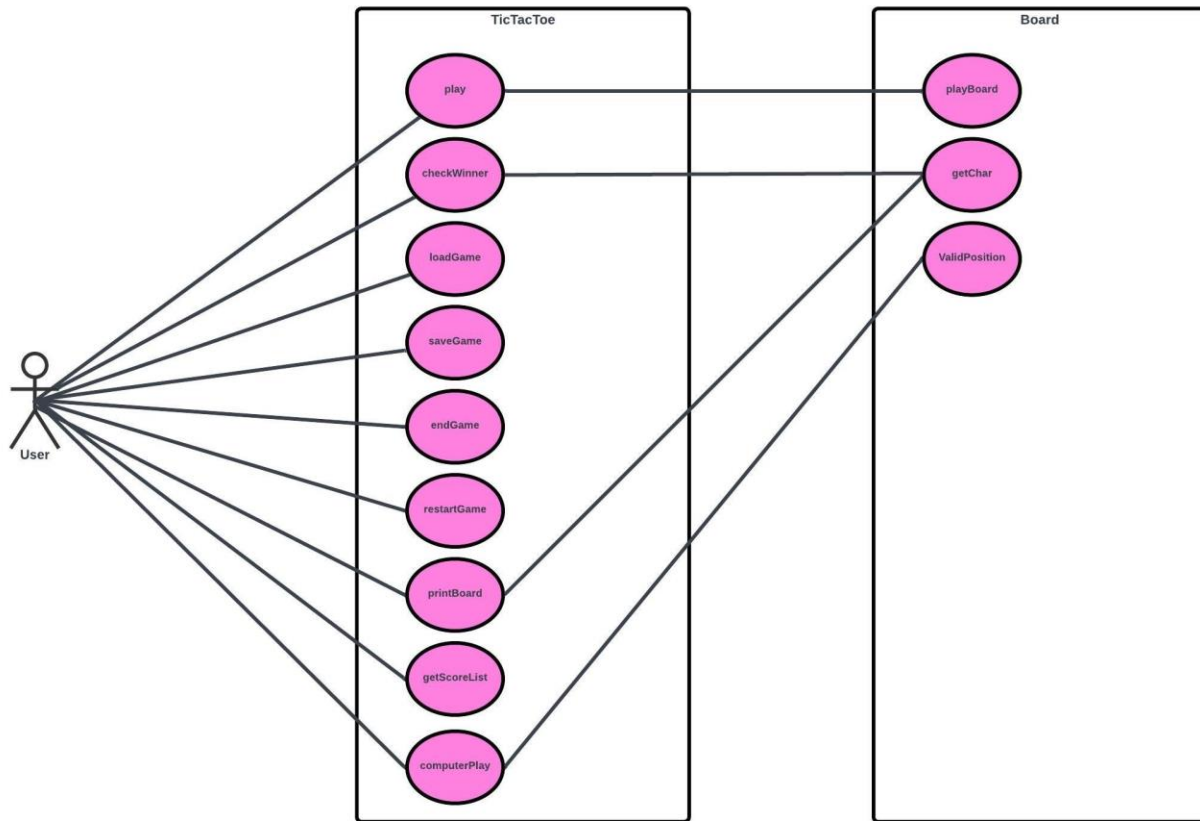
Access modifiers were utilized, so inner functionality doesn't need to be exposed to the user, the user only has access to public methods provided by the package.

- Diagrams

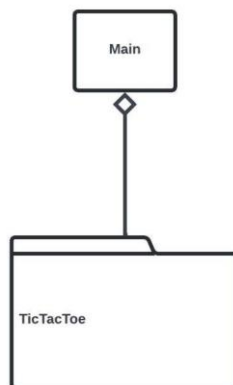
## Class Diagram



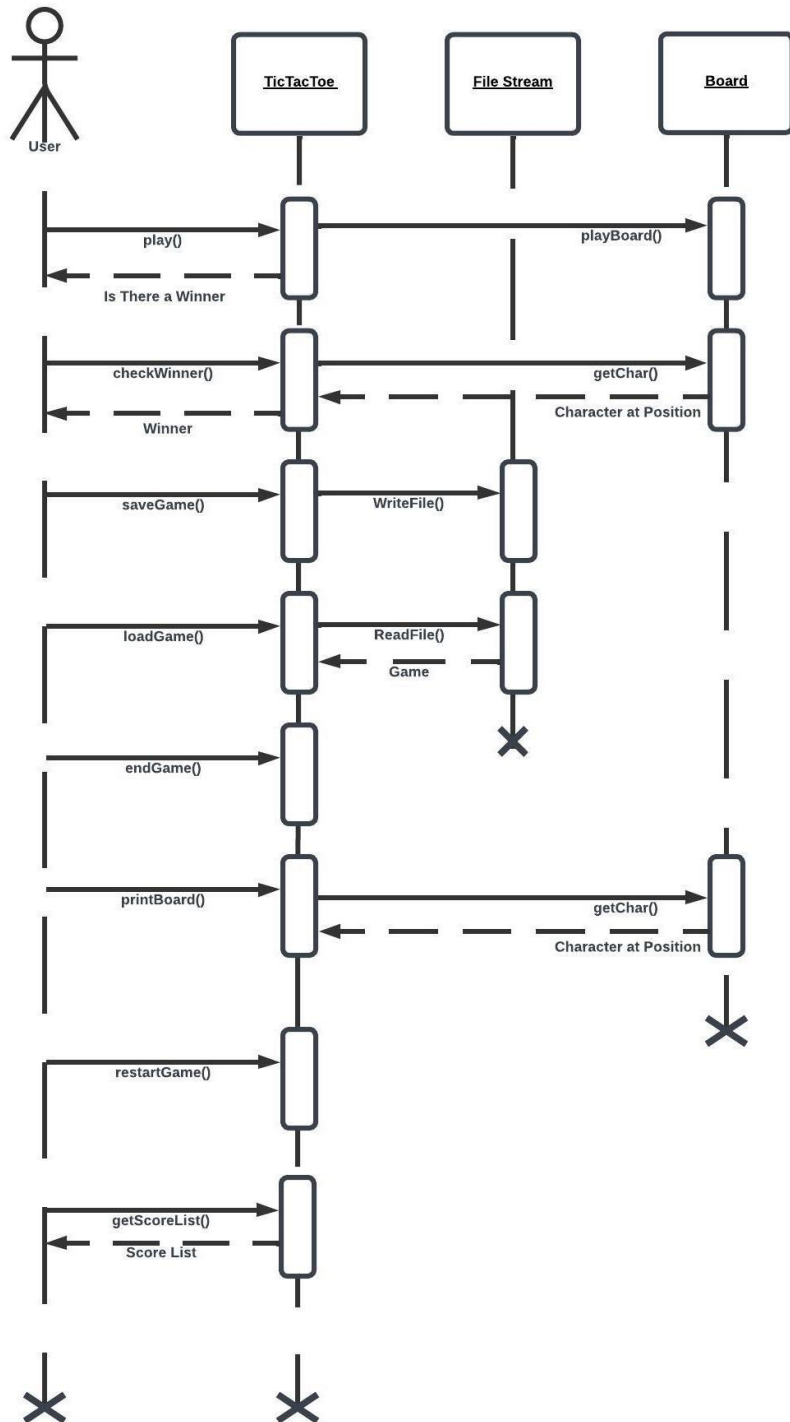
## UseCase Diagram



## Package Diagram



# Sequence Diagram



- Functionality

The functionality of the project is made very simple to understand for the user, the user only has to interact with the "TicTacToe" object and use the methods provided and handle exceptions that may occur, all exceptions are provided to the user by the package.

- How to Use

The project is very well documented, every method is greatly explained and has industry standard documentation with each parameter explained so the user doesn't have to look at the source code to understand what the method does or what parameters are needed.

- Project Overview

<https://youtu.be/pYrnmxJ8FXs?si=1Dh8sEWxFFvSrGbt>